

Is Transport Behaviour During COVID-19 Sustainable?



Elisa Bin, research engineer at ITRL, tells us more about ITRL's ongoing research about the effect of COVID-19 on transport.

Elisa conducted this research in collaboration with Claudia Andruetto, Yusak Susilo and Anna Pernesål. Their upcoming publication is titled:

The trade-off behaviours between virtual and physical activities during COVID-19 pandemic period

In order to make ITRL's research more accessible to both industry and the public, we asked a range of questions designed to give an overview of our research and inspire you to learn more.

Can you tell us about the background of the study?

The outbreak of COVID-19 affected people lives and economy all over the world. The ways to cope with the crisis vary a lot between socio-demographic and socio-economic groups. In this work, we investigate how people's habits have changed and the impact of digital alternatives in replacing physical activities.

We designed a survey about people habits before and during the crisis focusing on commuting, travel, work, shopping and free-time. We also asked our participants about their perceived safety in engaging in physical activities during the crisis and if they think they are going to maintain the new habits once the crisis is over.

Why did you feel that this was the right approach?

We wanted to reach as many people as possible in several different countries and to so our survey is available in English, Swedish and Italian. We decided to collect data with a survey since that is a quick way to get a lot of information from many people all over the world.

How many different countries were involved?

From 20 April to 18 May, we collected around 800 valid answers from 23 different countries. The majority of our respondents are from Italy, Sweden and India. It is interesting to compare data from various countries as experiences have been so different.

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What did you hope to achieve with the study?

With this study, we aim to understand how people changed their behaviour during COVID-19; if this was more or less sustainable and if people think they will keep their new behaviours, or if they will go back to the old ones. We tried to ask questions that touch on different aspects; personal life, sports, hobbies, working life, travel, use of internet etc.

How did you design the study?

We decided to use a survey as the format and have most of the questions as closed questions, so multiple choice. But some open questions too, which is very interesting to provide people more with space to explain themselves.

Half of the survey is dedicated to transportation; commuting, traveling and so on. The main focus is on how people did things before the start of the pandemic and how they are doing that now, if they can still do the same things.

The main focus is on understanding how people used to behave before the outbreak compared to how they behave now. There is a section dedicated to shopping (grocery and non-grocery). We tried to see if people are using more e-commerce and the

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purchase of what kinds of items have been cut down the most. There is also a section dedicated to the perceived risks. This is to understand how people feel while engaging in certain activities; like visiting stores, being at the workplace or using public transport. This is important to determine how the pandemic will affect the transportation of the future. Finally, we also asked if people think they will keep the new habits after the crisis or if they will go back to the old situation.

Can you give an overview of the results?

People have decreased their travel behaviour tremendously: there is a decrease of 74% in commuting and 84% decrease in travelling for leisure. Most of the people that reduced or quite commuting are public transport users, which is the logical consequence of public transport being less corona-safe than for example travelling in a private car or in the open-air by bike.

The decrease in undertaking leisure trips is 84%, indicating that still 16% of the respondents continued with the non-essential activities. This percentage is likely to be attributed to Swedish inhabitants that were not subjected to such a strict lockdown as was observed in Italy. An other interesting observation is that households with kids, i.e. families, tended to lessen their free-time activities to a smaller extent than households without kids. This could be the consequence of the unstoppable need to entertain the youngsters, or perhaps this is the result of COVID-19 being communicated as less harmful and dangerous for young people - leading to families taking less active measures.

The last finding I would like to point out concerns grocery shopping. We observed that being a female correlates to a larger reduction in grocery shopping than there would be if you were a man. This might indicate that there has been a shift in responsibilities in the household, and that the men took over the grocery shopping from the women. This could be caused by men more working from home and therefore being more involved in the daily routine.

We observed a similar relation between elderly people and youngsters. This is most likely the results of elderly people being more vulnerable to the virus, leading to more efforts to reduce the number of grocery trips - for example by asking family & friends to take care of this or reducing the frequency.

Have there been any surprising results?

None of our findings came as a big surprise, but it is really interesting to see the differences in responses between countries. We know that in some regions the number of infections and the strictness of the lockdown was much different and we could clearly see this from survey data as well. If we for example compare the results of Sweden with that of Italy, we see much different responses. Which is not surprising of course, it rather confirms the validity of the data!

What else could this research lead to?

This paper is currently under review for the special issue Transport in the COVID-19 virus era at the *European Transport Research Review (ETRR)*. We are also analysing the survey data with focus on the effect of COVID-19 on e-commerce. With the increase in internet usage of 75%. it would be interesting to see the effect on online shopping. We observed that many people were forced by the COVID-19 pandemic to do purchases online while they formerly would not do that, and it would be valuable to quantify these changes.

From our data we are hopefully also able to determine whether people live in cities or rural areas and how that correlates to their decisions. We can imagine that these two groups have different (shopping) habits and that this distinction can give us a better understanding on what happened during COVID-19. Additionally, it would also be interesting to see if there are social groups that have been disadvantaged. For example, with the increased use of internet, there may be many that don't have internet at home.

Additionally, at the moment of writing the COVID-19 situation has not settled yet and we are not back to normal. But the question remains what this new normal will look like. This pandemic could very well have changed our behaviour permanently and perhaps we will do a new survey to substantiate and understand this.

A preprint of the study is now [available](#). Feel free to contact [Elisa](#) for more information.